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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,016	11/12/2003	Michael D. Potter	2420/123	6205

7590 10/17/2006
Nixon Peabody LLP
Clinton Square
P.O. Box 31051
Rochester, NY 14603-1051

EXAMINER

TAMAI, KARL I

ART UNIT PAPER NUMBER

2834

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,016

Applicant(s)

POTTER, MICHAEL D.

Examiner

Tamai I.E. Karl

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,8-16,19,21-27,29-34,36-43,45-52 and 54-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,6,8-16 and 19-33 is/are allowed.
- 6) ☒ Claim(s) 34,36-43 and 45-51 is/are rejected.
- 7) ☒ Claim(s) 38 and 47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/23/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/1/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The objection to the drawings is withdrawn.

Specification

2. The objection to the specification is withdrawn.

Claim Objections

3. The objections to Claims 27 and 29-33 are withdrawn.
4. Claim 43 is objected to because of the following informalities: line 7, two is misspelled "tow". Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The rejection of Claims 27, 31, 52, and 56 under U.S.C. 102(b) over Iwamatsu (JP 02-219478)(see translation) is withdrawn.
7. Claims 34, 39, 41, 43, 48, 50, 52, 58 are rejected under 37 U.S.C. 102(b) as being anticipated by Kirjavainen (WO97/31506). Kirjavainen teaches a

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housing with a monopole, non-conducting diaphragm moving between two fixed electrodes (figure 2c). Kirjavainen teaches a measuring circuit load connected to the electrodes to use the generated signal as a position sensor. Kirjavainen shows the diaphragm being a single layer.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 34, 39, 41-43, 48, 50-52, 56 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu (JP 02-219478)(see translation) and Crites (US 4288735). Iwamatsu teaches moving a stored static charge with respect to a pair of electrodes and outputting the resultant potential (figure 1). Iwamatsu teaches moving the electrodes while holding the stored static charge stationary (figure 3). Iwamatsu teaches the moving member is a single layer of a material such as PbZrTi oxide (inherently includes titanium oxide). Iwamatsu teaches every aspect of the invention except the stored charge being a monopole charge in a single layer dielectric. Crites teaches the electret generator with a monopole charge q to provide a long lasting generator of AC or DC power to MOS circuitry. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the generator of Iwamatsu with the

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monopole charge, as in Crites, to provide a long lasting generator of AC or DC power to MOS circuitry.

10. Claims 36, 45, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu and Crites. Iwamatsu and Crites teach every aspect of the invention except the additional stored static charge being at least 1×10^{10} charges/cm². It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the generator of Iwamatsu with the additional stored static charge being 1×10^{10} charges/cm² to optimize the current generated, and because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (see *In re Aller*, 105 USPQ 233).

11. Claims 37, 46, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu (JP 02-219478)(see translation) and Crites (US 4288735), in further view of Jewett et al. (Jewett)(US 3,405,334). Iwamatsu and Crites teach every aspect of the invention except resilient member supporting the electret. Jewett teaches an electrostatic generator for powering a load having housing 155 to protect and support the generator and monopoles electrodes supported by diaphragm 148 for generating electrical power in a small vibrating electrode arrangement. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the generator of Iwamatsu and

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Crites with the housing and monopole arrangement of Jewett to provide an compact generator with low voltage and high current, as taught by Jewett.

12. Claims 40, 49, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu and Crites, in further view of Spence (US 3,786,495). Iwamatsu and Crites teach every aspect of the invention except the member having two or more dielectric layers with the charge stored therebetween or the specific material (as set forth in claim 13). Spence teaches an electrostatic charge being stored being insulating layers 14 and 16, of silicon oxide and silicon nitride. It would have been obvious to a person of ordinary skill in the art to construct the electrostatic generator of Iwamatsu and Crites with the insulating layers of Spence to create a large charge density.

13. Claim 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu and Crites, in further view of Wahlstrom (US 4126822). Iwamatsu and Crites teach every aspect of the invention except storing the output potential. Wahlstrom teaches electrostatic generators are used to store/recharge watch batteries. It would have been obvious to a person of ordinary skill in the art to construct the electrostatic generator of Iwamatsu and Crites with the battery of Wahlstrom to prolong the life a device with a battery.

Allowable Subject Matter

14. Claims 1-3, 6, 8-16, 19, and 21-26 are allowed.

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15. Claim 38 and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Response to Arguments

16. Applicant's arguments with respect to claims 27-58 have been considered but are moot in view of the new grounds of rejection.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KARL TAMAI
PRIMARY EXAMINER

10/12/06